```
print('3-ランダムフォレスト')
```

```
3-ランダムフォレスト
```

```
print('3-1')
```

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y,
                                                    test_size = 0.3,
                                                    random_state = 0)
```

```
from sklearn.ensemble import RandomForestClassifier
```

```
model = RandomForestClassifier(random_state = 0)
model.get_params()
```

```
{'bootstrap': True,
 'ccp_alpha': 0.0,
 'class_weight': None,
 'criterion': 'gini',
 'max_depth': None,
 'max_features': 'auto',
 'max_leaf_nodes': None,
 'max_samples': None,
 'min_impurity_decrease': 0.0,
 'min_samples_leaf': 1,
 'min_samples_split': 2,
 'min_weight_fraction_leaf': 0.0,
 'n_estimators': 100,
 'n_jobs': None,
 'oob_score': False,
 'random_state': 0,
 'verbose': 0,
 'warm_start': False}
```

```
model.fit(x_train, y_train)
```

```
RandomForestClassifier(random_state=0)
```

```
from sklearn import metrics
y_pred = model.predict(x_test)
metrics.confusion_matrix(y_test, y_pred)
```

```
array([[19,  0,  0],
       [ 0, 21,  1],
       [ 0,  0, 13]])
```

```
print(metrics.accuracy_score(y_test, y_pred))
```

```
0.9814814814814815
```